

IN THE CLAIMS

Under the title heading "Claims," add the words - - We claim: - - .

Amend claims 1, as follows:

1. (Amended) A nucleic acid molecule comprising a nucleic acid [molecule] sequence encoding a (poly)peptide having a function of the human K⁺ ion eag [channel which is] channel, wherein the nucleic acid sequence is selected from the group consisting of:

- (a) a nucleic acid [molecule] sequence comprising a nucleic acid molecule encoding the polypeptide having the amino acid sequence [of SEQ ID: No] SEQ ID NO:3 or SEQ ID NO:4;
- (b) [a nucleic acid molecule comprising the nucleic acid molecule having the DNA sequence of SEQ ID: No] the nucleic acid sequence SEQ ID NO:13 or SEQ ID NO:14;
- (c) a nucleic acid [molecule hybridizing] sequence that hybridizes to the complementary strand of a nucleic acid molecule of (a) or (b); [or] and
- (d) a nucleic acid molecule being degenerate to the sequence of the nucleic acid molecule of (c).

2. (Amended) [A] The nucleic acid molecule that specifically [hybridizing] hybridizes to the nucleic acid molecule of claim 1 [which] and comprises the nucleic acid sequence 5'-GGGAGGATGACCATGGCT-3'

3. (Amended) The nucleic acid molecule of claim 1 or [2 which] 2, wherein the nucleic acid molecule is DNA.

4. (Amended) The nucleic acid molecule of claim 1 or [2 which] 2, wherein the nucleic acid molecule is RNA.

5. (Amended) The nucleic acid molecule of [any one of claims 1 to 4 encoding] claim 1 or claim 2, wherein the nucleic acid sequence encodes a fusion protein.

6. (Amended) A vector comprising the nucleic acid molecule of [any one of claims 1 to 5] claim 1 or claim 2.

7. (Amended) The vector of [claim 6 which is] claim 6, wherein the vector is selected from the group consisting of an expression [vector and/or] vector, a gene targeting vector [or] and a gene transfer vector.

8. (Amended) A host transformed with [a] the vector of claim 6 [or 7].

9. (Amended) The host of [claim 8 which is] claim 8, wherein the host is selected from the group consisting of a mammalian cell, a fungal cell, a plant cell, an insect cell [or] and a bacterial cell.

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10. (Amended) A method of producing the (poly)peptide encoded by the nucleic acid molecule of [any one of claims] claim 1 [or 3 to 5] comprising the steps of culturing the host [of claim 8 or 9] comprising said nucleic acid molecule and isolating the produced (poly)peptide.

11. (Amended) A (poly)peptide encoded by the nucleic acid of [any one of claims 1 or 3 to 5 or produced by the method of claim 10] claim 1.

✓ In claim 12, delete "to," and substitute therefor -- against --.

13. (Amended) The antibody of [claim 12 which] claim 12, wherein the antibody is a monoclonal antibody.

14. (Amended) A [pharmaceutical] composition comprising the nucleic acid molecule of claim [2, the vector of claim 6, the polypeptide of claim 11] 1 or claim 2, a vector nucleic acid molecule, a polypeptide encoded by said nucleic acid molecule, and/or the antibody [of claim 12 or 13 and] specifically directed against said polypeptide, wherein the composition additionally comprises a pharmaceutically acceptable carrier and/or diluent and/or excipient.

15. (Amended) A diagnostic composition comprising the nucleic acid molecule of [any one of claims 1 to 5, the vector of claim 6, the polypeptide of claim 11 and/or the antibody of claim 12 or 13] claim 1 or claim 2, a vector comprising said nucleic acid molecule, a polypeptide

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encoded by said nucleic acid molecule and/or antibody specifically directed against said polypeptide.

16. (Amended) A method for preventing or treating a disease which is caused by the undesired expression or overexpression of the nucleic acid molecule of [any one of claims] claim 1 [or 3 to 5], comprising the step of introducing an inhibitor of the expression of [the] said nucleic acid molecule [of any one of claims 1 or 3 to 5] or an inhibitor of the function of the (poly)peptide [of claim 11] encoded by said nucleic acid molecule into a mammal affected by said disease or being suspected of being susceptible to said disease.

17. (Amended) A method for preventing or treating a disease which is caused by the malfunction of the (poly)peptide [of claim 11 comprising introducing an inhibitor of the expression of] encoded by the nucleic acid molecule of [any one of claims 1 or 3 to 5] claim 1 comprising the step of introducing into a mammal affected by said disease or being suspected of being susceptible to said disease, an inhibitor of the expression of said nucleic acid molecule or an inhibitor or modifying agent of the malfunction of [the] said (poly)peptide [of claim 11] or [the] said nucleic acid molecule [of any one of claims 1 or 3 to 5] encoding heag or [the] said polypeptide [of claim 11] having heag activity [into a mammal affected by said disease or being suspected of being susceptible to said disease].

18. (Amended) The method of claim 16 wherein said inhibitor of the expression or overexpression of said nucleic acid molecule is [a nucleic acid molecule of claim 2] the nucleic